



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,614	11/21/2003	Steffen Beyer	010739.51198D1	8198
23911	7590	06/30/2006	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			DIXON, MERRICK L	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/717,614

Applicant(s)

BEYER ET AL.

Examiner

Merrick Dixon

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on rce filed 4-6-06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11,13-19 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11,13-19 and 23-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
PRIMARY EXAMINER

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

Art Unit: 1774

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2

Claims 11-14, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strasser et al (US 6134881) in view of Haidn et al (US 6151887).

The cited primary reference teaches the basic claimed invention including a process for making a combustion chamber comprising making a fibrous structure with a three dimensional matrix, forming a silicon carbide matrix and making at least one composite material jacket from the resulting composite material- col 5, lines 44-56; col 6, lines 11-66; col 7, lines 15-30. Although the primary reference forms its silicon carbide matrix during its process it fails to expressly teach how such silicon is introduced into its composite to form the silicon carbide matrix. The secondary reference to Haidn et al, however, teaches that it is known in the art to form silicon carbide matrix via addition of silicon into respective fibrous material of the instant art- col 6, lines 13-42 ; col 3, lines 58- col 4, line 4. It would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teachings of the secondary reference to Haidn et al and form its silicon carbide matrix via feeding silicon material to the fibrous material, such as taught by Strasser et al, thus converting same to a silicon carbide matrix, in the absence of unexpected results. Such a combination would have been obvious to provide improved oxidative protection and improved stability to the resulting chamber- col 3, lines 46-57. Concerning article claims 12, 21 and 24, it is submitted that the claimed article limitations are of no patentable consequences to the instant question for patentability which must be patentable distinct. Ex parte Pfeiffer, 1962 C.D. 408 (1961). However, it is submitted that it would have been obvious in the cited references, to provide the fibrous structure with such claimed specific material, in the absence of unexpected results depending on desired product characteristics/properties. Concerning claims 13 and 14, the primary reference teaches weaving of its parts in col 7, lines 18-25; col 8, lines 30-35.

3

Art Unit: 1774

Claims 17- 20,22,23,25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strasser et al(US 6134881) in view of Tuffias et al(US 5855828).

The primary reference to Strasser et al was discussed above, inter alia. The primary reference fails to teach the aspect of metal coating its respective layers. The secondary reference to Tuffias et al, however, teaches that it is known in the art to deposit metal-like material (metallic coatings) to combustion devices such as taught by the primary reference- col 4, lines 28-43; col 6, lines 10-14; col 7, lines 3-22. It would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teachings of the secondary reference to Tuffias et al and facilitate the primary reference with similar type metallic coating as required by claims 17 and 18 and in the absence of unexpected results and additionally to impart oxidation resistance to the chamber- col 10, lines 1-3. Concerning claims 25,27 and 29, the secondary reference teaches the aspect of infiltrating the fibrous material during its patented process- col 9, lines 1-5; col 3, lines 1-30. It is submitted same is done simultaneous when the metallic material is deposit on the fibrous material . the cited primary reference teaches multilayered chamber- fig 5a; col 3, lines 21-30; col 6, lines 11-66. see secondary reference, also, col 8, lines 30-55. Concerning claims 17,22,26 and 28, the secondary reference teaches electroplating in col 3, lines 59-63. It is submitted that it would have been obvious to utilize such well known process in the obvious combined teachings of the reference, as set forth by the examiner and as claimed claimed by applicants.

Concerning claims 20 and 23, the secondary reference teaches affixing load bearing layers on its chamber in col 8, lines 55-63; col 10, lines 4-20. Concerning claims 13,14 and 16, the secondary reference teaches weaving attachment means in col 4, lines 59-

Art Unit: 1774

66. Concerning claims 15, 16 and 19, the claimed shaped spaces are directed to article limitations are of no patentable consequences to the instant question for patentability which must be manipulatively distinct. Ex parte Pfeiffer, 1962 C.D. 408(1961).

However, Strasser et al, teaches similar spaces “worked” into the composite material, as required by claim 16 and understood by the examiner, in its layer material in col 4, lines 1-9. As regarding the aspect of manipulatively applying metal coating layers, it is submitted the secondary reference teaches this aspect in col 6, line 12 and more specifically in col 9, lines 61-64. Here the secondary reference expressly teaches such claimed manipulative step.

4

Applicants who wish to send a facsimile (draft copies) for the examiner’s immediate review can do so by using the Examiner’s personal fax number at 571-273-1520. The faxing of all papers must conform with the notice published in the Official Gazette, 1096 O.G. 30 ( November 15, 1989). **NOTE: All facsimiles sent to the examiner’s personal fax number should be in draft-forms and will be treated as informal.**

**Same facsimiles will not be entered** in the related applications unless otherwise agreed and noted by the examiner.

**The fax number for all other fascimile is 571-273-8300.**

Information about **the status of an application** may be obtained from the Patent Information Retrieval system (**Private PAIR**).

Art Unit: 1774

Status inquires for **published applications** may be retrieved from either **Private PAIR** or **Public PAIR**. Questions about the PAIR system should be directed to the Electronic Business Center at **866-217-9197**.

Any questions concerning the instant communication should be directed to Examiner Dixon, at 571-272-1520, Mondays, Wednesdays and Thursdays, between 12 noon and 8 PM, eastern time .



Merrick Dixon

Primary Examiner

Group 1700